Amendments to the Specification:

Please replace paragraph [0032] with the following amended paragraph:

[0032] Referring to FIG. 3, light-emitting zone 302 further comprises a room temperature vulcanized (RTV) silicone layer 308 and a mirror layer 309. Silicone layer 308 forms an interface with the plastic or glass layer 304, which has light guides 301 embedded in it. Light guides 301 are cast or machined into the base layer 304. Mirror layer 309 forms an interface with silicone layer 308. These two layers act as additional reflective layers. In a preferred embodiment of the invention, silicone layer 308 has a refractive index of about 1.4. Light guide 301 extends continuously from an end 306 proximate the light-injection area to a distal end 307 of light-emitting zone 302.

Please replace paragraph [0034] with the following amended paragraph:

[0034] FIG. 5 illustrates a cross section 500 of the light-emitting zone with the irregular tetrahedrally-shaped light guides having interior surfaces 501. Surfaces 501 are preferably treated with a reflective material in accordance with the invention. In a preferred embodiment of the invention, the reflective material is a highly reflective paint. In another embodiment, interior surfaces 501 may have additional smaller surfaces introduced to provide additional surface area for light diffusion and emission. In still another embodiment, the interior surfaces may be abraded, etched, chemically treated, silk screened, or laminated.

Please replace paragraph [0035] with the following amended paragraph:

[0035] FIG. 6 shows a cross-section 600 of the light-emitting zone when viewed from its proximal end (i.e., near the light-injection area). Note the small cross-sectional areas of the light guide grooves.

Please replace paragraph [0036] with the following amended paragraph:

[00016] FIG. 7 shows a cross-section 700 of the light-emitting zone when viewed from the distal end of the

light-emitting zone. Note the large cross-sectional areas of the light guide grooves.

Please replace the abstract on page 16 with the following amended abstract:

~~A flat panel luminaire having embedded irregular tetrahedrally shaped light guides for controlled light extraction is provided.~~ ~~The~~ A flat panel luminaire includes a light source, which can be remote, an optical light pipe, and a light-emitting panel. The light-emitting panel includes a tapered light-injection zone joined to a light-emitting zone having the embedded irregular tetrahedrally-shaped light guides. The surface and cross-sectional areas of the light guides gradually increase as the light guides extend away from the tapered zone. Methods of illuminating an area using such light guides are also provided.